



DOE Performance Indicators

for Environment, Safety & Health

Report Period Ending
March 1996



Management Summary

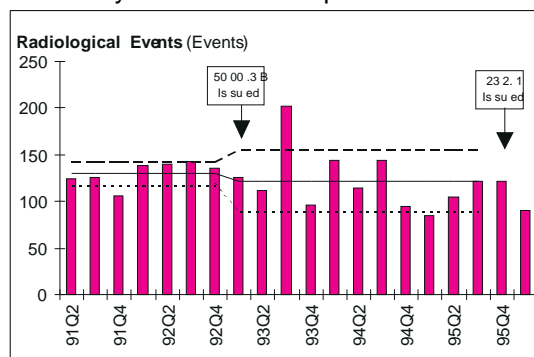
Office of Environment,
Safety and Health



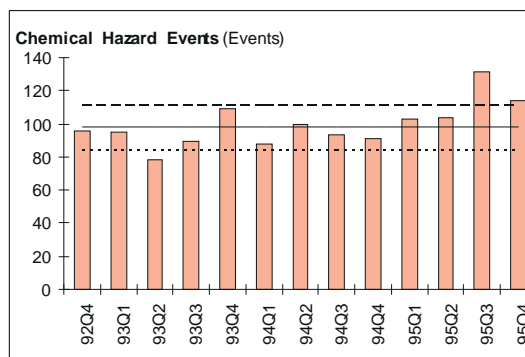
Management Summary

Six of the DOE Environment, Safety and Health Performance Indicators were selected this quarter to highlight below.

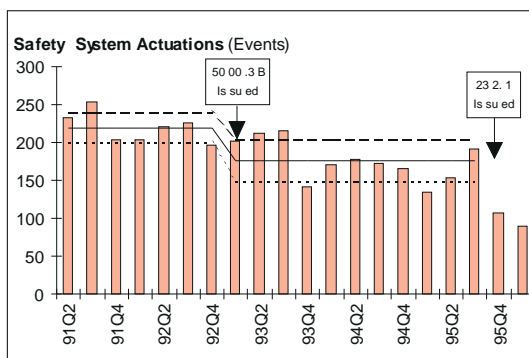
Lost Workday Case Rate and Reportable Occurrences of Releases to the Environment are included in the Secretary of Energy's Key Indicators. DOE workers, contractors, and subcontractors are included in data obtained from Occurrence Reports. Federal workers have been excluded from the data obtained from the Computerized Accident/Incident Reporting System for Indicators 9 - 12. The horizontal lines on the graphs represent the historical baseline ± 1 standard deviation. Quarterly data is presented as calendar quarters. Trends are identified based on a statistical analysis of the data. A detailed discussion of the method (multinomial likelihood ratio test) is provided in the Glossary section of the report.



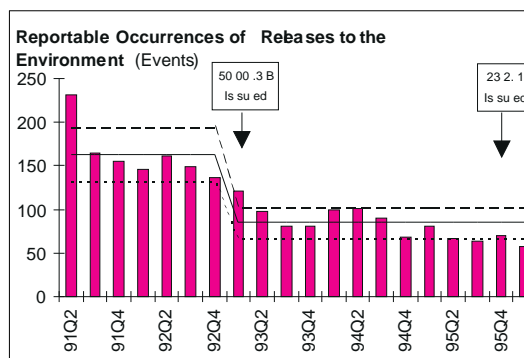
Number of reportable radiological events as defined in DOE Order 232.1, *Occurrence Reporting and Processing of Operations Information*. These events are made up of both personnel contaminations and radiation exposures.



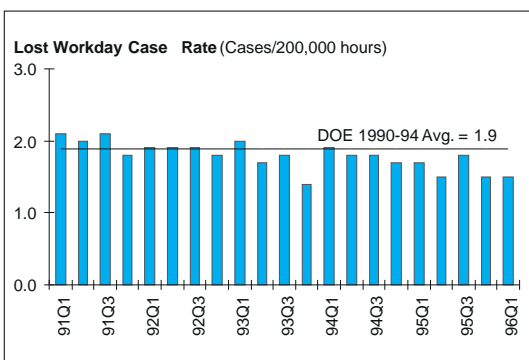
Number of events reportable under DOE Order 232.1, *Occurrence Reporting and Processing of Operations Information*, that are gathered by a word search for specific chemical names.



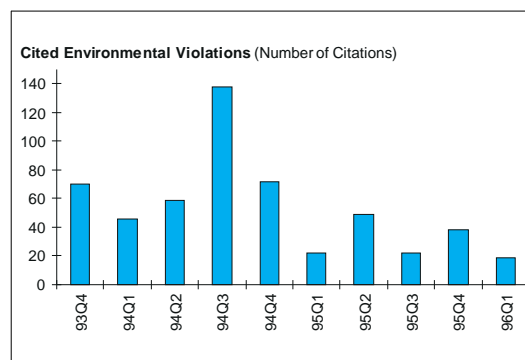
Number of operations-related events determined to be safety system actuations reportable under DOE Order 232.1, *Occurrence Reporting and Processing of Operations Information*.



Releases of radionuclides or hazardous substances or regulated pollutants that are reportable to federal, state, or local agencies.



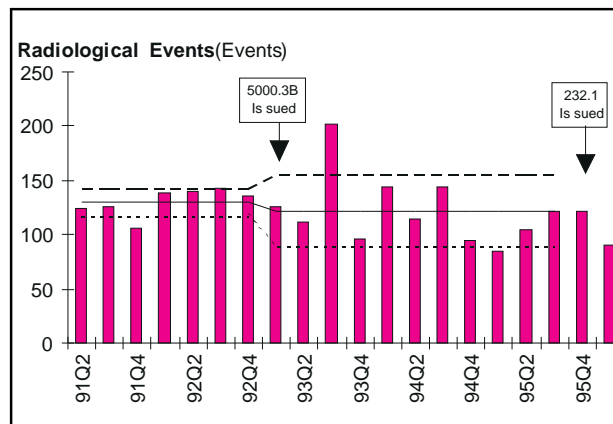
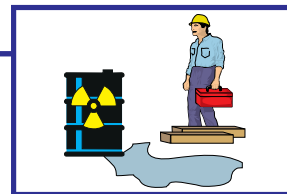
A lost workday case is a work related injury or illness that involves days away from work or days of restricted work activity, or both. Lost Workday Case (LWC) Rate is the number of lost workday cases per 200,000 hours worked.



Number of environmental violations cited by regulators in enforcement actions at DOE facilities.

Radiological Events

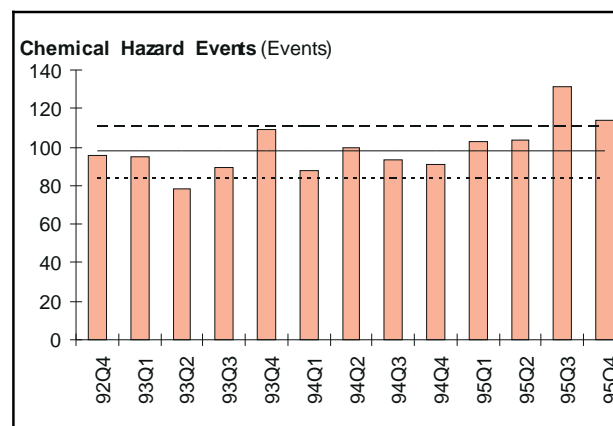
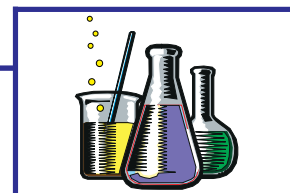
- A highly probable decreasing trend exists over the last 13 quarters since Order 5000.3B was issued.
- A total of 111 individuals were involved in the 90 reported radiological events during the 1st quarter 1996. (Seven of the 90 events reported involved more than one individual.)



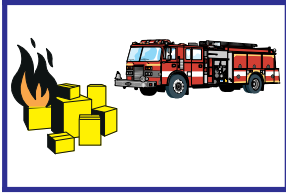
Number of reportable radiological events as defined in DOE Order 232.1, *Occurrence Reporting and Processing of Operations Information*. These events are made up of both personnel contaminations and radiation exposures.

Chemical Hazard Events

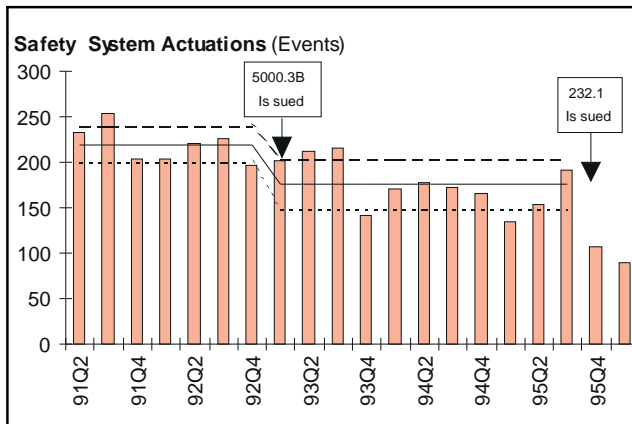
- Over the last 13 quarters, there is a highly probable increasing trend in the total number of chemical hazard events. The overall increasing trend is influenced by an increased number of events reported by United States Enrichment Corporation (USEC) facilities.
- Class 3 and 4 events (less serious) comprise 87% of the chemical hazard events identified over the last 13 quarters. There is a highly probable increasing trend in the number of Class 3 and 4 events identified over this period.
- During the last 13 quarters, there is a highly probable decreasing trend in the number of Class 1 and 2 events, though the decreasing slope is slight.



Number of events reportable under DOE Order 232.1, *Occurrence Reporting and Processing of Operations Information*, that are gathered by a word search for specific chemical names.



Safety System Actuations



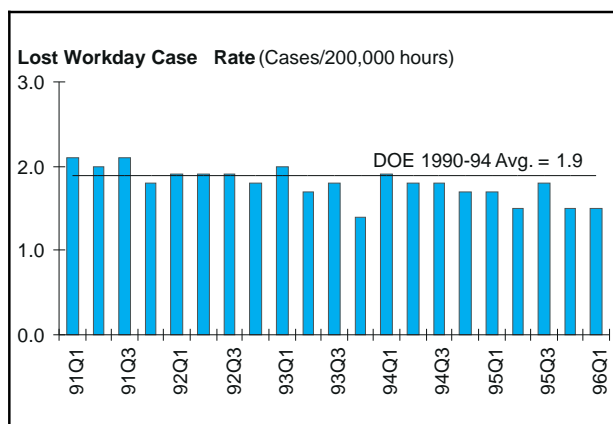
Number of operations-related events determined to be safety system actuations reportable under DOE Order 232.1, *Occurrence Reporting and Processing of Operations Information*. This includes actuation of any safety class equipment or alarm, unplanned electrical or service systems outages, serious disruption of facility activity related to weather, facility evacuations, or loss of process ventilation. These events have potential to impact the safety and health of workers in the vicinity.

- The decrease in the number of safety system actuations reported for 4th quarter 1995 and 1st quarter 1996 can be attributed to implementation of changes in the occurrence reporting Order from 5000.3B to 232.1. This was confirmed through discussions with field personnel. The primary changes to reporting criteria, which impact this indicator, involve deleting the requirements to report:

- inadvertent/false alarms, unless they are considered by the site to be significant and
- precautionary facility evacuations.



Lost Workday Case Rate

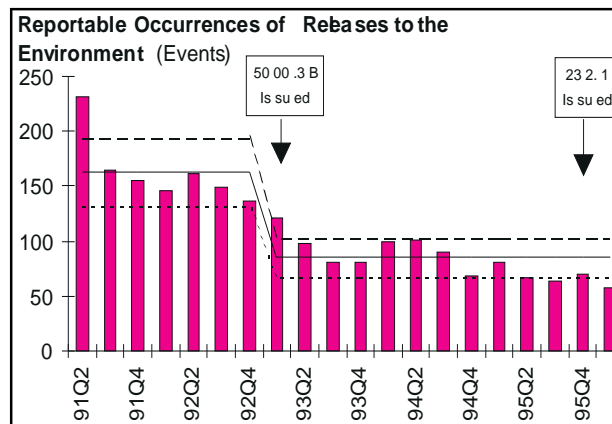


A lost workday case is a work related injury or illness that involves days away from work or days of restricted work activity, or both. Lost Workday Case (LWC) Rate is the number of lost workday cases per 200,000 hours worked.

- The 1995 LWC rate has been relatively constant. All four quarters of 1995 and the 1st quarter of 1996 fall below the 5-year average (1990-1994) LWC rate.

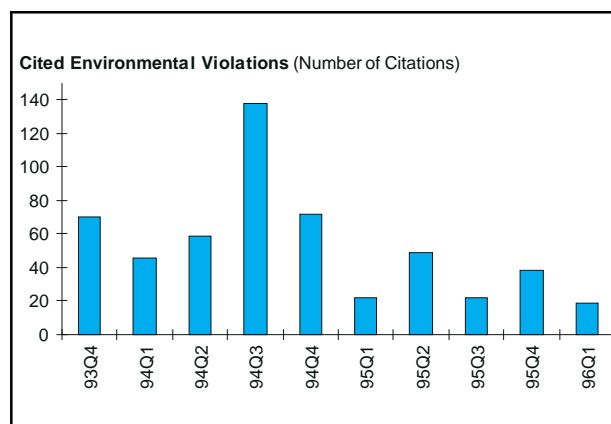
Reportable Occurrences of Releases to the Environment

- Reportable release incidents have significantly decreased over the entire 20-quarter period displayed. There is also a significant decreasing trend since 93Q1, when the reporting criteria were changed by DOE Order 5000.3B, *Occurrence Reporting and Processing of Operations Information*.
- Implementation of Occurrence Reporting Order 232.1 in 95Q4 did not appear to significantly impact this indicator.
- Most (84%) of 1st quarter 1996 reports involved hazardous materials; the remaining 16% involved radioactive material.

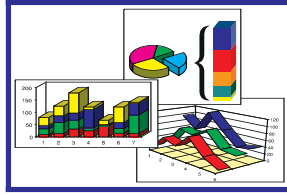


Cited Environmental Violations

- The number of violations cited decreased 58% from 1994 to 1995 (from 315 in 1994 to 131 in 1995).
- Between 1994 and 1995, cited violations related to the Resource Conservation and Recovery Act (RCRA) decreased 73% (from 151 to 41). Clean Water Act violations decreased 77% (from 124 to 29). Clean Air Act violations increased 56% (from 36 to 56).
- The data remain quite variable from one quarter to the next making it difficult to identify meaningful trends.



Number of environmental violations cited by regulators in enforcement actions at DOE facilities.



Summary

The following indicators have been selected as DOE performance indicators for worker and facility safety and the environment.

Worker and Facility Safety

- Radiological Events
- Worker Radiation Dose
- Investigations of Serious Events
- Chemical Hazard Events
- Safety System Actuations
- Procedure Violations
- Safety Equipment Degradation
- Near Misses and Safety Concerns
- Lost Workday Case Rate
- Lost Workday Incidence Rate
- Total Recordable Case Rate
- Occupational Safety & Health Cost Index
- Worker Health
- Spent Nuclear Fuel and Plutonium Vulnerabilities Resolved
- Open DNFSB Recommendations

Environment

- Radiation Dose to the Public
- Reportable Occurrences of Releases to the Environment
- Toxic Chemical Releases
- Environmental Permit Exceedances
- Cited Environmental Violations
- Environmental Fines and Penalties
- Environmental Compliance Milestones Met
- Pollution Prevention

A companion report, which includes analysis of all of the indicators, is available. For further information, contact

Office of Operating Experience Analysis
and Feedback
EH-33/CXXI/GTN
US Department of Energy
Washington, DC 20585

Phone: 301-903-8371
E-mail: Richard.Day@hq.doe.gov

The report is also available on the World Wide Web at <http://www.eh.doe.gov/pi>.